CAHPS 9th national USER GROUP MEETING

Update on the CAHPS Hospital Survey:

The Development Process

Marybeth Farquhar, RN, MSN

AHRQ Agency for Healthcare Research and Quality

CMS

U.S. Department of Health and Human Services

Goal of the H-CAHPS Initiative

To produce data on patient perspectives on care that allows objective, meaningful comparisons between hospitals that can help consumers make more informed hospital decisions.

Overview

- CMS has partnered with AHRQ to develop a standardized hospital instrument and data collection protocol
- AHRQ's CAHPS II Consortium participated in the development of CAHPS Hospital Survey

AHRQ's Role & H-CAHPS

- Develop a survey to measure patients' perspectives of hospital care
- Develop sampling and data collection methods
- Develop consumer reports
- Assist CMS in testing these elements
- Continue cognitive and field testing of the survey
- Provide opportunities for stakeholder input throughout the development process

H-CAHPS Development

- Federal Register “Call for Measures” (2002)
- Literature Review
- Solicited input from hospitals, stakeholders, and vendors
- Cognitive Testing
- 66-item H-CAHPS Questionnaire (Jan 2003)

H-CAHPS Testing

- Three-State Pilot of H-CAHPS (June 2003)
- Cognitive testing-Spanish Version
- Consumer Focus Groups
- CT Pilot Test (Fall 2003)
- Revised H-CAHPS Instrument (32-items) submitted to CMS (Dec 2003)

Additional Testing of H-CAHPS

- **Pre-National Implementation Testing (Jan 2004)**
- **Additional Consumer Focus Groups**
- **Voluntary H-CAHPS Test Sites**

Voluntary Test Sites

- California Regions of Kaiser Permanente
- Massachusetts General Hospital
- California Institute for Health System Performance
- Premier, Incorporated
- Calgary Health Region, Alberta Canada

Research Questions

- Mode Effects including IVR
- Screeners vs. Non-Screener items
- Effects of Intervening Stays
- Effects of Lag Time
- Trending
- Language Comparisons
- Psychometrics

CAHPS 9th national USER GROUP MEETING

Implementation of CAHPS Hospital Survey

Elizabeth Goldstein
Centers for Medicare & Medicaid Services

AHRQ Agency for Healthcare Research and Quality
CMS
U.S. Department of Health and Human Services

Design Goals

- To generate data on patient perspectives on care that will allow objective and meaningful comparisons across hospitals for public reporting
- To minimize the disruption to current survey processes used for internal improvement to the extent possible

CAHPS Hospital Survey: Core Questionnaire

CAHPS Hospital Survey items can be seen as a module that can be combined with hospital-specific items

- Hospital-specific items are of the hospital or vendor's choosing
- Hospitals have the option to use the CAHPS Hospital Survey as a stand-alone questionnaire if they wish

Current Status

- **CMS received recommendations/options from AHRQ based on their testing**
- **CMS submitted a 25-item version of the CAHPS Hospital Survey to NQF and OMB**
- **Federal Register notice published November 19th solicits input on instrument and implementation strategy**
  - 60-day comment period

Approach to Survey Administration

- **Use continuous sampling approach**
- **Allow flexibility in mode of administration**
  - Mail only
  - Telephone only
  - Mixed mode
  - Active IVR

Estimation

- **Will produce hospital-level statistics that summarize patient responses to CAHPS Hospital Survey items**
- **Will include adjustments needed for data comparability**
  - Adjustment for case mix
  - Adjustment for mode effects

Implementation

- Will be implemented through the national Hospital Quality Alliance (HQA)
- HQA is a public-private effort on hospital quality reporting
- Current measures focus on heart attack, heart failure, and pneumonia care

Roles in National Implementation

CAHPS 9th national USER GROUP MEETING

Hospital/vendor role (data collection)

- Develop sampling frame of relevant discharges
- Draw required sample of discharges
- Collect patient perspectives on care data using CAHPS Hospital Survey
- Submit CAHPS Hospital Survey data to CMS in standard format

AHRQ Agency for Healthcare Research and Quality
Advancing Excellence in Health Care
CMS
U.S. Department of Health and Human Services

Roles in National Implementation, continued

Government Role (support and reporting)

- Provide training and technical assistance
- Ensure the integrity of data collection
- Accumulate data from individuals hospitals/vendors
- Conduct mode experiment
- Produce hospital-level estimates
- Conduct research on presentation of data for public reporting
- Publicly report comparative hospital data

Steps in Implementation

- NQF consensus
- PRA clearance process
- Hospital recruitment
- Training and survey preparation
- Dry run
- Survey field operations

Steps in Implementation

- Data accumulation and editing
- Hospital-level estimation and adjustments
- Hospital preview
- Research on presentation of data
- Web posting of hospital-level data

Calgary Health Region

Presented by
Tim Cooke
Consultant,
Survey and Evaluation Unit

Who is the CHR?

- Canada's largest integrated healthcare provider
- *Manages care for over 1 million people*
- *4 Tertiary care hospitals (1 pediatric)*
- *5 regional hospitals*
- 7649 Beds (including long term)
- Diversity of healthcare services

Survey and Evaluation Unit

- Specialized in measurement and analysis
- Both qualitative and quantitative
- Conducts selected measurement activities within CHR
- Five research consultants, 25 survey staff
- PhD level support backing up consultants
- Data collection undertaken within CHR
- CATI lab and scanned forms facility

Caution of Differences

- Canadian population (demographics)
- Integrated services (Health Region)
- Public healthcare (no direct cost to user)
- “Consumer” choice in healthcare is limited
  - healthcare a high priority issue for public

In Common

- Acute care experience very similar
- Patients have mostly the same issues
- Measurement challenges are similar
- Common measures and standards useful
  - Development costly / resource intensive
  - Collaboration mutually beneficial

Our Motives

- Needs and objectives reasonably well aligned
- Rigorously developed and tested tool
- **Public domain** process / transparency
- Extensive use of HCAHPS likely in US
- Possibility of benchmark standards
- Gain experience from working with CAHPS team

Calgary Pilot - Objectives

- Mode effects
  - Mail versus Phone differences
- Format effects
  - Screener versus No Screener differences
- Psychometric properties in Canadian population
- Usefulness of reported data
  - To managers and QI staff
  - Public ?

Survey

- Core HCAHPS items (the 32 item survey)
- 2 wait time items added
- 2 family centered care items added
- 2 ethnicity items modified
- 1 Marital status item added
- 1 Open Ended Item added (other issues / problems)
- 1 Date completed item (self report)

4 Versions

- Screener version (38 items)
- No screener version (35 items)
- CATI phone scripts developed for both
- Paper surveys as close as possible to original
- Reference to specific hospital stay

Study Design

- 2 X 2 Randomized Study
- Mail versus Phone
- Screener versus No Screener
- Proportion Maternal, Surgical, and Medical controlled within each group
- Weekly samples (2 weeks post discharge)
  - Control of lag time

Raw Response Rates

- 65% Mail
- 72% Phone
- Within Mail
  - 63% Screener
  - 66% No Screener

- All randomly selected cases included in computation

Response Breakdown

TABLE 1. Completion Status By Mail and Phone Modalities

MAIL SURVEY			PHONE SURVEY		
Completion Status	**Count**	**Rate**	**Completion Status**	**Count**	**Rate**
Complete	872	0.646	Complete	670	0.719
In Hospital	4	0.003	In Hospital	39	0.042
Indeterminate	0	0.000	Indeterminate	7	0.008
Invalid Contact Information	50	0.037	Invalid Contact Information	59	0.063
Language Barrier	1	0.001	Language Barrier	54	0.058
Passed Away	23	0.017	Passed Away	18	0.019
Protocol Complete	384	0.284	Protocol Complete	42	0.045
Refused	6	0.004	Refused	31	0.033
Unable / Still Recovering	10	0.007	Unable / Still Recovering	12	0.013
Under 18 years of age	0	0.000	Under 18 years of age	0	0.000
Total Sample	1350	1.000	**Total**	932	1.000

Note: Language Barrier by Mail may be inferred from screening question which determines proxy or assistant status. This is not shown but is still lower than phone – suggesting phone is more sensitive to identification of language issues.

Survey Costs

- $7.14 per complete Mail
- $8.82 per complete Phone
- Canadian dollar = 0.83 US dollar

Table 2. Costs of Mail and Phone Survey Relative to Completes

Modality	No Programming or OH		+ Programming		+ Prog. + 25% OH	
	Total	Per Comp.	Total	Per Comp.	Total	Per Comp.
Mail	$6,223.29	$7.14	$7,583.09	$8.70	$9,478.87	$10.87
Phone	$5,907.07	$8.82	$7,168.07	$10.70	$8,960.08	$13.37

Note: Costs are based on actual CHR labor, mailing, and paper costs. Costs may vary depending on inputs

Marginal Costs Mail

- Post Card (mailing 2) very cost effective
  - Reminder card only

Table 3. Marginal Costs of Mail Survey for respective Mail Stages

Mail Stage	No Programming or OH		+ Programming		+ Prog. + 25% OH	
	Total	Per Comp.	Total	Per Comp.	Total	Per Comp.
Mailing 1	$3,270.74	$6.04	$4,115.67	$7.60	$5,144.59	$9.49
Mailing 2	$1,288.96	$7.08	$1,572.80	$8.64	$1,966.00	$10.80
Mailing 3	$1,639.09	$11.06	$1,870.12	$12.62	$2,337.65	$15.78
Total	$6,198.79		$7,558.59		$9,448.24	

Note: Costs are based on actual CHR labor, mailing, and paper costs. Costs may vary depending on inputs

Marginal Response Mail

- Third mailing still yields additional 10%
- May be very important if overall rate is low

Table 4. Mail Completion Rates by Mailing Stage

Mailing Stage	Complete	Cumulative Rate	Marginal Rate	Adjusted Complete	Cumulative Rate	Marginal Rate
Mailing 1	512	0.379	0.379	542	0.401	0.401
Mailing 2	172	0.507	0.127	182	0.536	0.135
Mailing 3	140	0.610	0.104	148	0.646	0.110
Error	48	0.646				
Total	872			872		

Results Summary

- Phone
  - Response rate higher (expected)
  - Proportion of older and sicker excluded was higher
  - Feedback more positive
  - Less missing data
- Screen more negative than no screen for pain composite and single item

Results Summary (Continued)

- Psychometric properties of HCAHPS survey was good
  - But internal consistency reliability for medication and discharge composites low
- Case mix factors *similar* to US to previous findings and to US findings for HCAHPS and CAHPS
- Marital status potentially useful for case mix
- DRG (CMG * risk) not useful for case mix

Challenges in Pilot

- Survey sample pulled 2 weeks post discharge
  - Abstracted data not available for 3 months (had to categorize into maternal, surgical, and medical)
  - Maternal: linked to baby record to confirm healthy baby with LOS <=5 days
  - Surgical: linked to OR database for confirmed OR time and certain exclusions (e.g.,, D& C procedure)
  - Medical: Process of excluding ineligible cases (e.g., patient had psychiatric consult or stay on psychiatric unit)

Challenges (continued)

- Sample process and randomization complex
  - Weekly samples and 4 study groups
  - Had to control proportions of maternal, surgical, medical within each study group
  - Required construction of a sample database with several complex queries and multiple linkages to complex data systems

Challenges continued

- Reporting to managers
  - Need to work on format of reporting
  - Nature of study and collaboration dictated timelines
  - Next phase of implementation (future) plan to have some results available within 1 week of survey

HCAHPS limitations (in Canada)

- Short survey (pro and con)
  - More items needed for use in QI
    (Tested, standardized, public domain, benchmarks)
- Issues Comparing Canadian and US data
  - No Canadian benchmarks
  - Different case mix adjustment
  - Different health care system
  - Low internal consistency reliability of medication and discharge information composites in Calgary data

Future

- Ongoing phone survey process (weekly sample)
- Qualitative probing (triggered by low scores)
- Qualitative used to develop supplemental items
- SPC reporting of ~ weekly results by care unit
- Periodic reports at 6 month intervals
- Qualified comparison to US benchmarks or data
- Comparison of similar sub-populations
  - Anyone interested?

Thanks

AHRQ
- For their support and insight

CAHPS grantees and team at RAND
- For their significant role in guidance and analysis

Contact Information

Tim Cooke

Survey and Evaluation Unit, QIHI
Calgary Health Region
909E South Tower, Foothills Medical Center
1403 – 29th Street N.W.
Calgary, Alberta
T2N-2T9

tim.cooke@calgaryhealthregion.ca

403-944-8923

QI Quality Improvement & Health Information

CAHPS 9th national USER GROUP MEETING

The California Experience with HCAHPS

(PEP-C III)

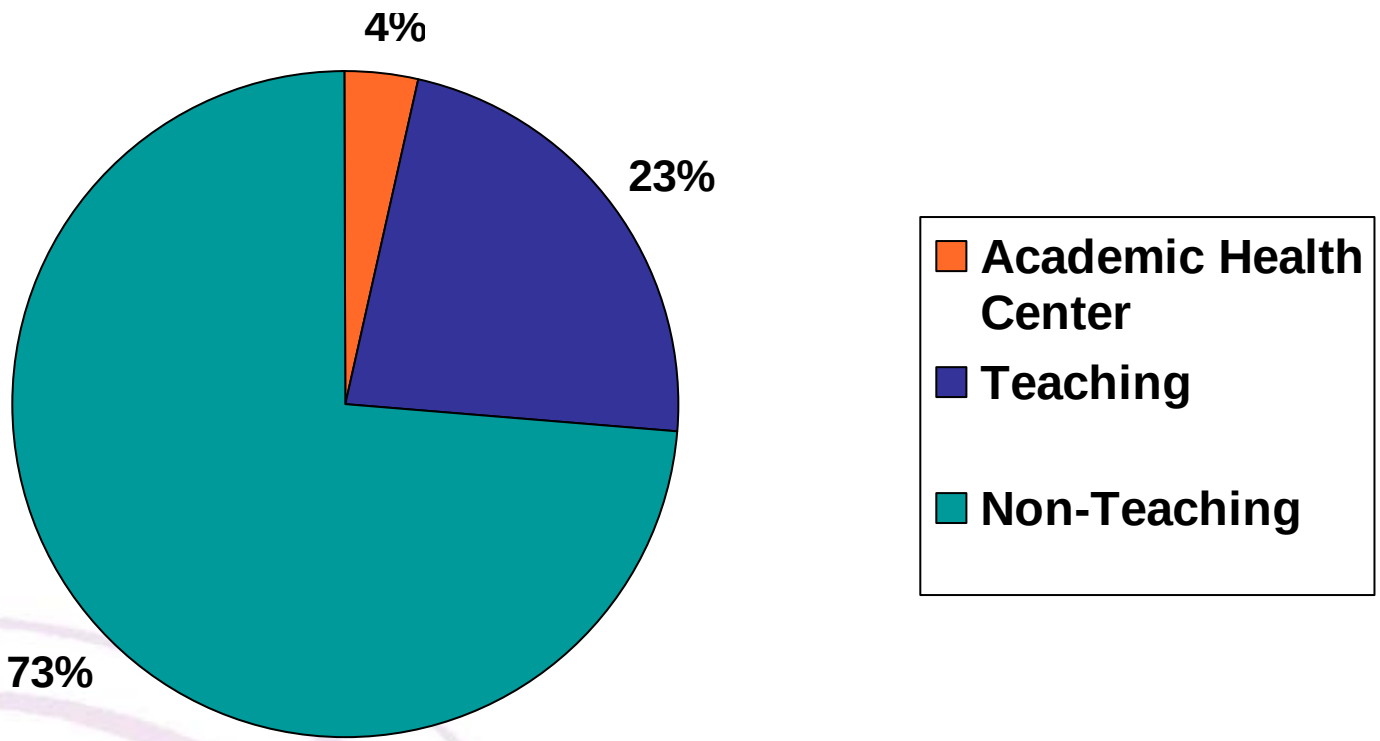
Marsha S. Nelson, MBA, RN
President & CEO
California Institute for Health
Systems Performance

AHRQ Agency for Healthcare Research and Quality
CMS
U.S. Department of Health and Human Services

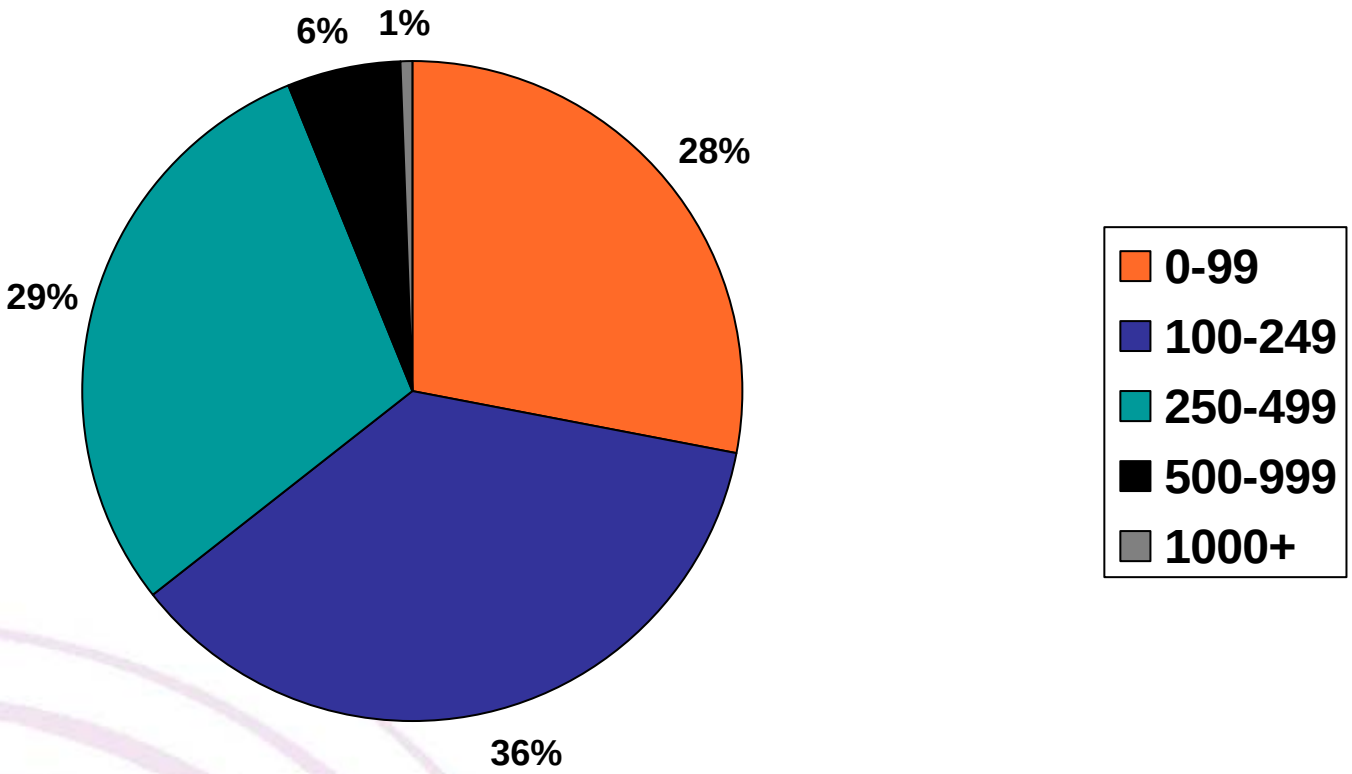
Background

- PEP-C I – publicly reported in 2001
  - 113 hospitals
- PEP-C II – publicly reported in 2003
  - 181 hospitals
- PEP-C III – publicly reported in 2004
  - 200 hospitals (194 adult, 6 peds)
  - Used “HCAHPS Picker Plus” blended tool

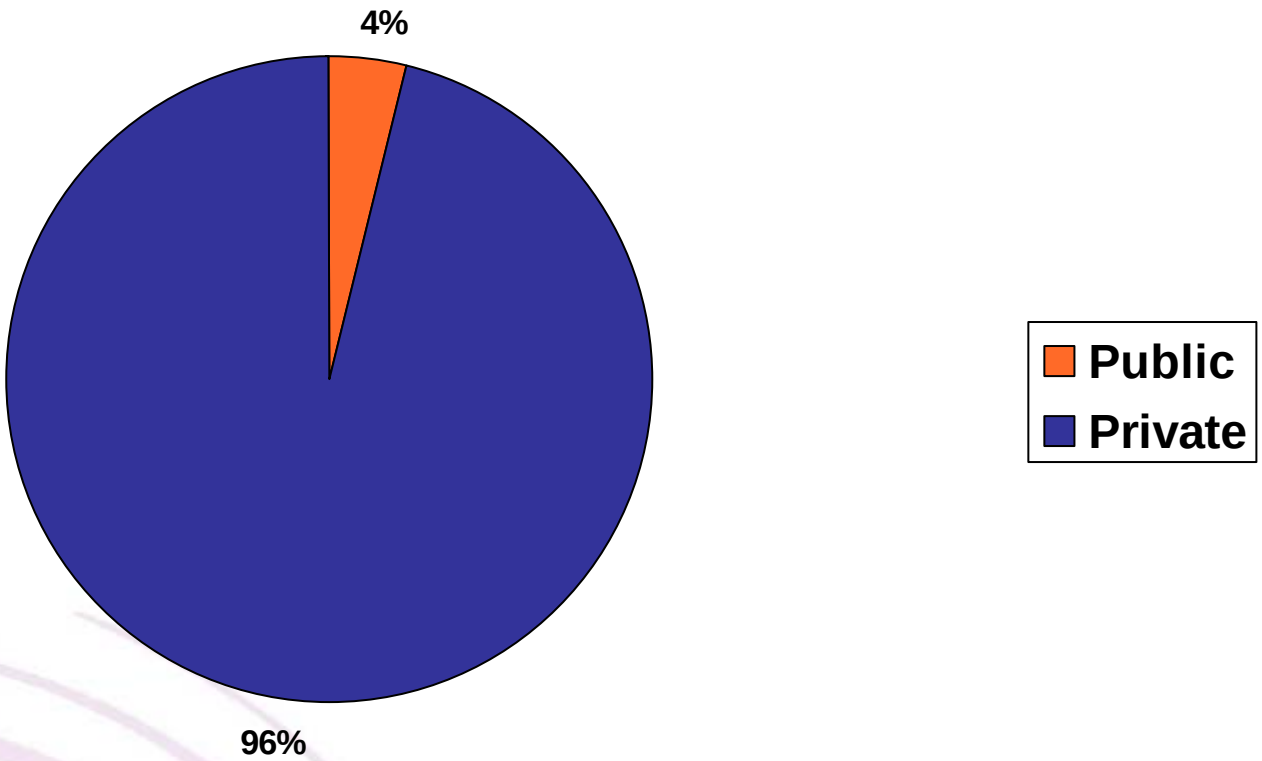
Teaching Status



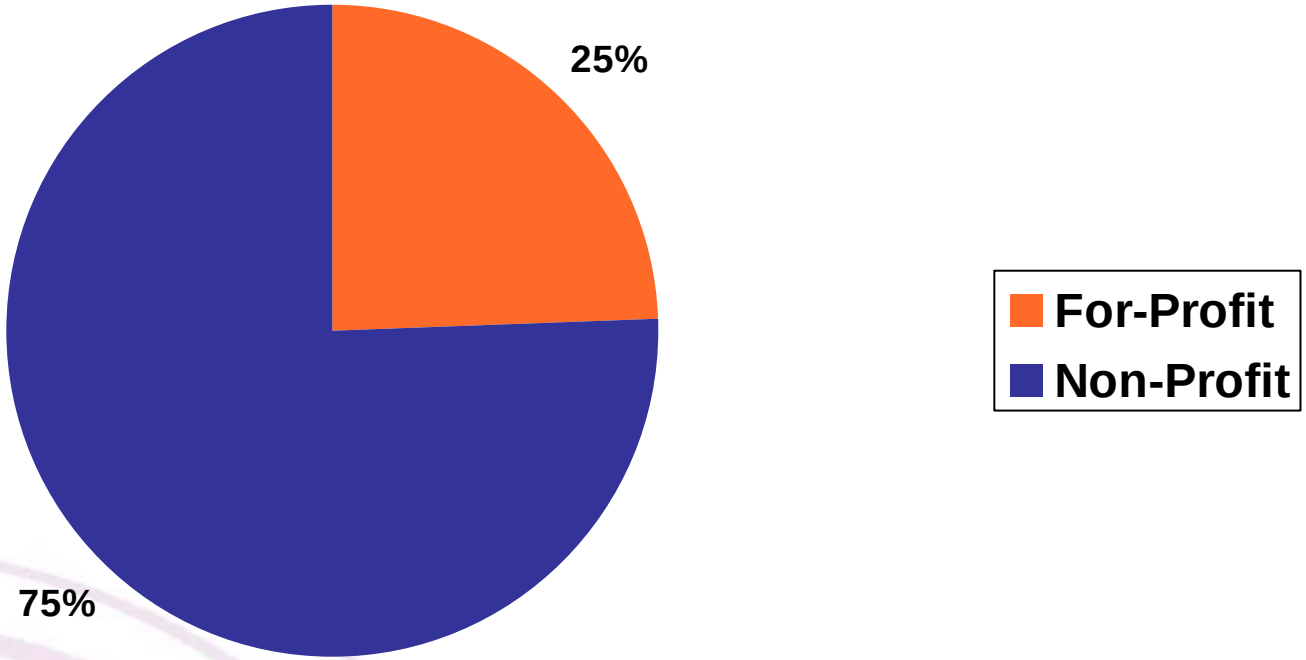
Bed Size



Ownership



Corporate Status



Background

- PEP-C is a statewide initiative to publicly report patients' experience at California hospitals
- All general acute care hospitals invited to participate
- Participation is voluntary
- Ability to trend data important to participants
- Also wanted to be at the forefront of the HCAHPS initiative

Background

- Worked to develop blended HCAHPS Picker Plus survey tool
- Aligned HCAHPS items to the Picker Dimensions of Care
  - Reporting style questions on both
  - No HCAHPS items for 3 Picker dimensions

Background

- Regression analysis conducted on PEP-C II data
- Some items were “duplicates”
- Some items were significant predictors of overall satisfaction
- Some items were significant but not on HCAHPS tool
- Final tool has 71 questions

Final Survey Instrument

- 71 Questions
  - 24 HCAHPS
  - 8 HCAHPS Demographic
  - 24 Standard Picker
  - 5 ED
  - 5 Safe medical practices (+2 HCAHPS)
  - 2 Interpreter Services
  - 2 CalNOC
  - 1 open-ended

Final Survey Instrument

- **Medical, Surgical & OB versions**
- **Offered in English, Spanish and Chinese**

Challenges with Survey Tool

- Different response values
  - HCAHPS – four point
  - Picker – three point
- Required new scoring system
- Confusing for hospitals – required more education
- Pediatric component of PEP-C but no pediatric component of HCAHPS

Challenges with process overall

- Participants not always engaged
- Timely data file receipt
- Data file fields not always complete
- Not enough eligible sample for small hospitals
- Difficult for hospitals to pre-identify native language

Methodology

- **Sample period – Nov 03 through Feb 04**
- **Sample size – 300 - 600 outgo per facility**
- **Survey – reminder letter – survey**
  - **Switched to reminder letter from postcard due to HIPAA guidelines**

Findings

- Overall response rate of 43%
- 34,689 individuals responded
- 92.2% (31,983) - English
- 7.4% (2,567) - Spanish
- 0.4% (139) - Chinese

Overall mean scores by language

Measure	Language			Overall
	English	Spanish	Chinese	
All Dimensions Combined	82.5	81.6	78.6	82.5
Respect	87.4	83.3	79.1	87.1
Coordination of Care	85.4	89.2	87.7	85.6
Information	81.1	81.9	77.9	81.2
Emotional Support	79.8	76.4	76.4	79.5
Physical Comfort	83.5	84.1	75.6	83.5
Involvement of Family	80.1	75.6	77.2	79.7
Transition to Home	76.7	81.2	72.8	77.0
Surgery Specific	85.8	84.1	81.6	85.7
Childbirth Specific	83.0	77.7	84.7	82.3
Experiences with Safe Medical Practice	82.2	82.3	71.8	82.2
Rate Hospital	84.9	91.7	80.5	85.3
Would Recommend	85.4	89.2	78.1	85.7

Findings

- **Inpatients admitted through ED report lower scores**
- **54.9% of PEP-C III respondents admitted through ED**
- **Suggests need for further measurement in this area**

Mean Scores – ED Admission vs. Planned

	Emergency	Planned in advance
Number of Respondents	12,890	10,582
Percentage of Respondents	54.9%	45.1%
Measure	Mean Scores	
All Dimensions Combined	79.2%	85.4%
Respect for Patient Preferences	84.9%	89.2%
Coordination of Care	83.5%	90.1%
Information and Education	77.8%	83.4%
Physical Comfort	81.7%	83.6%
Emotional Support	75.5%	82.8%
Involvement of Family and Friends	77.0%	84.7%
Continuity and Transition	71.3%	80.6%
Surgery Specific	79.7%	88.2%
Experiences with Safe Medical Practice	79.8%	83.4%
Rate Hospital	84.0%	85.3%

Findings

- **Picker Dimensions of Care hang together with new HCAHPS questions**
- **Had to develop model by which to report the two different response scales**

Additional Findings

- **Side-by-side study to assess differences / similarities in 3 tools:**
  - **HCAHPS only (32 questions) – 45% response rate**
  - **HCAHPS Picker Plus (71 questions) – 45.3%**
  - **Picker Inpatient tool (70 questions) – 39.5%**
- **Length of survey did not impact response rate**

HCAHPS Reporting

- Public report – September 14, 2004
- Organized by Picker dimensions of care
- Target audiences – consumers, hospitals, HP, purchasers, regulators, legislators
- Print consumer guide, technical summary
- Website – www.calhospitals.org

Reporting

- **Robust communications and outreach to all forms of media – newspaper, TV, radio, trade journals**

- **Goal of reporting**
  - **Info for hospitals to drive improvement**
  - **Info for consumers to help in healthcare decision making**

Conclusions

- The HCAHPS survey questions can be combined with other surveys
- There is a benefit to a combined tool as it addresses other areas not on the core HCAHPS
- Blended tool focuses more on quality improvement opportunities

Kaiser Permanente HCAHPS Demonstration

CAHPS User Group Meeting

Baltimore, MD

December 2-3, 2004

Project Team

- Kaiser Permanente
  - Robert S. Mangel, Ph.D.
  - Carl A. Serrato, Ph.D.
  - Addrienne L. Cotterell
- American Institutes for Research
  - Roger E. Levine, Ph.D.
  - Steven A. Garfinkel, Ph.D.
- Agency for Healthcare Research and Quality
  - Marybeth Farquhar, RN, MSN
- CMS Sponsorship

Background

- Kaiser Permanente (KP) is a not-for-profit HMO
  - Operates in 8 regions
  - Mainly group model
- Demonstration site is KP Northern and Southern California
  - Has over 6 million members
  - Owns and operates 31 hospitals
  - Conducts ongoing inpatient survey to monitor hospital performance

Main Demonstration Objectives

- Instrument Development
  - Regular skip questions versus tailored inapplicable
  - Spanish language questionnaire
- Survey Administration
  - Mail only
  - Telephone only
  - Mixed mode (mail with telephone follow-up)
  - Interactive voice recognition (IVR)
- KP Specific
  - Comparisons and trending with current survey

Study Design

KAISER PERMANENTE®

- Main Experimental Treatments at 26 hospitals
  - Mail questionnaire only: 26 hospitals
  - Phone survey only: 10 hospitals
  - Mixed-mode: 9 hospitals
  - IVR:
- Sample
  - Sample taken from discharges not used in ongoing survey
  - Approximately 34,000 discharges available
  - Estimated 15,000 completed surveys (~ 45% response rate)
  - Target completes: 250 per treatment per facility

Study Design

KAISER PERMANENTE®

- Ten main questionnaire-mode combinations

Questionnaires	Mail		Telephone	
	Regular Skip	Tailored Inapplicable	Regular Skip	Tailored Inapplicable
English – Med/Surg	X	X	X	X
English – Maternity	X	X	X	X
Spanish – Med/Surg	X		X	
Spanish – Maternity	X		X	

- Additional questionnaire-mode combinations
  - Mixed-mode English Med/Surg and Maternity: Regular skip
  - IVR English Med/Surg: Regular skip
- Mode-questionnaire combinations randomly assigned

KAISER PERMANENTE®

Regular Skip versus Tailored Inapplicable (TI)

- Percent Screened Out
  - Telephone administration: Regular version screens out more than TI
  - Mail administration: No statistically significant difference between Regular version and TI
- Response Distribution
  - Statistically significant differences between Regular version and TI for both mail and telephone administration
    - Not necessarily on the same questions
    - TI more positive
  - For question with “yes” or “no” response category, significant differences found for both mail and telephone administrations.